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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/466,724 12/17/99 WATANABE

T 0020/K-210 (K)

EXAMINER

IM22/0911

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ART UNIT

PAPER NUMBER

1773  
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3

09/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/466,724

Applicant(s)

WATANABE ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation 1 to 100 $\mu$ m, and the claim also recites 3 to 75 $\mu$ m which is the narrower statement of the range/limitation, while claim 8 recites the broad recitation about 10 to about 40 $\mu$ m, and the claim also recites 10 to 20 $\mu$ m which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuo et al (USPN 5,190,830.) Matsuo et al teach a shaped or unshaped article of a non-ferrous metal sheet preferably aluminum having an organic, surface coating film containing conductive and/or semiconductive fine particles integrally bonded with a shaped or unshaped article of a steel sheet and this integrated body is subjected simultaneously to electrodeposition coating (Abstract; as instantly claimed in Claims 1-2 and 9.) Matsuo et al teach that the non-ferrous metal sheet having an organic, surface coating film containing conductive and/or semiconductive, fine particles shows excellent electrodeposition coating characteristics which can be easily regulated and hence, integral coating after bounding with a steel sheet gives the same degree of film thickness and surface smoothness on both of the non-ferrous metal and steel sheets and provides energy and labor savings in producing final products of uniform finish (Abstract.) Matsuo et al also teach that the steel sheet to be attached to the organic coated non-ferrous metal sheet may be coated with conventionally used coating compositions such as a coating of epoxy resin and zinc powder or it may be coated with the coating composition containing conductive and/or semiconductive fine particles of the invention (Col. 4, lines 31-42.) Matsuo et al teach that the

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coating containing conductive fine particles should preferably be applied to a dry thickness in the range of 0.05 to 20 $\mu$ m (Col. 3, lines 65-67, as instantly claimed in Claim 3) wherein the coating composition comprises 1 to 70wt%, preferably 5 to 50wt%, conductive particles including carbon, graphite and molybdenum disulfide (which would inherently result in volume and surface resistivity values within the instantly claimed ranges of Claims 4-5), and a resin such as polyester or other particularly suited resin (Col. 2, line 67 – Col. 3, line 6; Col. 3, lines 31-44.) Matsuo et al further teach that the electrodeposition materials most suited for the invention are cationic electrodeposition coating materials such as amine-modified epoxy resins, amine-modified polyurethane polyol resins (as instantly claimed in Claims 6-7), and amine-modified polybutadiene resins (Col. 4, lines 62-65.) Matsuo et al teach that the cationic electrodeposition film thickness should be about 20 $\mu$  (as instantly claimed in Claim 8.) Matsuo et al also teach that the method is particularly suitable for the coating of automobile bodies (as instantly claimed in Claim 9; Abstract.)

5. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Palaika et al (USPN 6,248,225.) Palaika et al teach a process for applying two electrodeposition coating, one on top of the other, to an electrically conductive substrate, such as steel or a metallic body for a motor vehicle, wherein the first coating is applied to provide a corrosion resistant film having a thickness of 10-50 $\mu$ m and comprises an electroconductive pigment such as carbon black, and wherein the amount of the pigment can vary depending on the specific type of pigment used, but the level needs to be effective to provide an electrodeposited coating with a conductivity greater than or equal to  $10^{-12}$  ohms/cm or a resistivity of less than or equal to  $10^{12}$  ohms-cm, preferably less than  $10^8$  ohms-cm (as in instant claims 1-5 and 9; Abstract; Col. 4, lines 23-67; Claims 1, 31

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and 35.) The second coating layer with a thickness of 3 to 70 microns is deposited from a cationic electrodepositable coating composition derived from an active hydrogen-containing polyurethane wherein the active hydrogen functionality is hydroxyl, primary and secondary amine (as in instant Claims 6-8; Col. 6-9; Examples.)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. The teachings of Matsuo et al are discussed above. Though Matsuo et al disclosed conductive coating compositions and conductive layers which would have volume and/or surface specific resistivity values within the instantly claimed invention, Matsuo et al do not specifically teach the ranges as instantly claimed. However, Matsuo et al teach that the content of the conductive and/or semiconductive particles and the particular particle material utilized in the coating composition affects the electrical properties of the resulting coating wherein the amount of the conductive and/or semiconductive particles must be high enough to provide sufficient current to flow during the electrodeposition coating step (Col. 3, lines 4-33.) Further, it is well known in the art that that good electrodeposition coating characteristics are affected by the volume specific resistivity and the surface resistivity of the layer to be coated. Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum electrical characteristics, such as volume and surface

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resistance values, of the coating containing conductive particles as taught by Matsuo et al to provide the desired good electrodeposition coating characteristics for a particular end use.

8. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al in view of Matoba et al (USPN 4,789,568.) The teachings of Matsuo et al are discussed above.

As stated previously, it is well known in the art that that good electrodeposition coating characteristics are affected by the volume specific resistivity and the surface resistivity of the layer to be coated. In particular, Matoba et al teach that in order to permit electrostatic coating of a sealer or top coating paint, a coating composition is preferably adjusted to a volume resistivity of not more than  $10^7$  ohms-cm, and especially  $10^5$  ohms-cm, by properly selecting the type or amount of the conductive powder to incorporate into the coating composition (Col. 5, line 54-Col. 6, line 8.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum type or amount of conductive particles to provide the desired electrical characteristics, such as volume or surface resistivity for subsequent electrodeposition as taught by Matoba et al on the coating composition layer taught by Matsuo et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5436 for regular communications and 703-305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



mrj  
September 9, 2001



Paul Thibodeau  
Supervisory Patent Examiner  
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